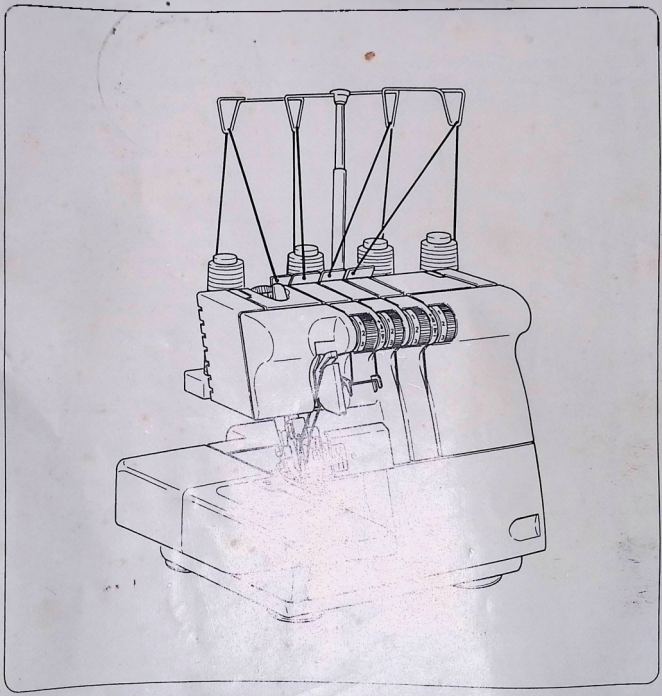
PROKOPAS

14 U444B/454B

3·4 THREAD OVERLOCK MACHINE

Operator's Guide



SINGER

14U 444B/454B

PREFACE

Thank you for your purchase of this sewing machine.
This machine intended for household use will provide you with excellent performance in sewing from light to heavy material (lawn to denim). Please refer to this booklet for proper use and optimum service. To get the most out of your sewing machine, read the entire operator's manual before attempting to operate the machine. Then familiarize yourself with the machine by following the operator's manual page by page.

To ensure that you are always provided with the most modern sewing capabilities, the manufacturer reserves the right to change the appearance, design or accessories of this sewing machine when considered necessary without notification or obligation.

SINGER CUSTOMER ASSISTANCE IN THE U.S.A.
TOLL–FREE NUMBER: 1–800–877–7762

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IMPORTANT SAFETY INSTRUCTIONS

When using this machine, basic safety precautions should always be followed including the following.

Read all instructions before using this machine.

DANGER – To reduce the risk of electric shock:

- The machine should never be left unattended when plugged in. Always unplug the machine from the electric outlet immediately after using and before cleaning.
- Always unplug before relamping. Replace bulb with the same type rated 12 volt, 6 watts. Be sure to replace the face plate which covers the light bulb before operating the machine.

WARNING – To reduce the risk of burns, fire, electric shock or injury to persons:

- Be sure that the electrical voltage of the socket outlet (wall receptacle) is the same as the rated voltage of the motor.
- Use this machine only for its intended use as described in this Operator's Guide. Use only attachments recommended by the manufacturer as contained in the Operator's Guide.
- To disconnect, turn all controls to the off ("0") position, then remove plug from outlet.
- Disconnect the power line plug from the socket outlet or switch the machine off when making any adjustments in the needle area, such as threading needle and loopers, changing needle, changing throat plate or changing presser foot, etc.
- Always unplug the machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the Operator's Guide.
- Do not attempt to adjust the motor belt. Contact your nearest Service Center should any adjustment be required.
- Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- Handle the foot controller with care and avoid dropping it on the floor. Be sure not to place anything on top of it.
- Always use the proper throat plate. The wrong plate can cause the needle to break.
- Do not use bent needles.
- When sewing, keep fingers away from all moving parts. Special care is required around the sewing machine needle.
- Do not pull or push fabric while stitching. It may deflect the needle causing it to break.
- For double insulated machines, when servicing use only identical replacement parts. See instructions for Servicing of Double-Insulated Appliances.
- Use only the handle to lift and move the machine.
- Never operate the machine if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into the water. Return the machine to the nearest authorized dealer or Service Center for examination, repair, electrical, or mechanical adjustment.
- Never operate the machine with any air openings blocked. Keep ventilation openings of the machine and foot controller free from the accumulation of lint, dust, and loose cloth.

- Never drop or insert any object into any opening.
- Do not use outdoors.
- Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
- Do not allow to be used as a toy. Close attention is necessary when the machine is used by or near children.
- Do not expose the machine or machine plastic case to sunlight directly. Also, do not keep it in a very warm or damp place.
- SERVICING OF DOUBLE-INSULATED PRODUCTS. In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means is provided on a double-insulated product, nor should a means for grounding be added to the product. Servicing of a double-insulated product requires extreme care and knowledge of the system, and should be done only by qualified service personnel. Replacement parts for a double- insulated product must be identical to those parts in the product. A double-insulated product is marked with the words "DOUBLE-INSULATION" or "DOUBLE-INSULATED."

SAVE THESE INSTRUCTIONS

Servicing should be performed by an authorized service representative.

This product is intended for household use.

FOR EUROPEAN AND SIMILAR TERRITORIES :

This product is suppressed for radio and television interference with the International Electrotechnical Commission requirements of the CISPR.

Machines for Great Britain and some other countries having similar wiring standards are shipped from the factory without a plug for connection to the mains. The wires in this mains lead are colored in accordance with the following code.

Blue: neutral (N) Brown: live (L)

As the colors of the wires in the mains lead of this appliance may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:

The wire which is colored blue must be connected to the terminal which is marked with the letter N or colored black. The wire which is colored brown must be connected to the terminal which is marked with letter L or colored red. If a 13 Amp. (BS 1363) plug is used, a 3 Amp. fuse must be fitted, or if any other type of plug is used, a 5 Amp. fuse must be fitted either in the plug or adaptor or at the distribution board.

Neither cord is to be connected to the earth terminal of a three-pin plug.

CONTENTS

Page

1. Accessories 4
2. Needle information 4
3. Principal parts 5
4. How to open looper cover 6
5. Principal parts behind looper cover 6
6. Preparation prior to sewing 6
7. Setting up the thread guide holder 7
8. How to remove and insert needle 8
   - To remove needle (s) 8
   - To insert needle (s) 8
9. How to remove and replace cloth plate 9
10. How to remove and replace cylinder cover 9
11. Threading the machine 10
    - Threading diagram 10
    - Understanding the color code 10
    - Stitch diagram 10
    - To thread the machine correctly 10
    - Important threading information 17
12. Chaining off and test sewing 18
13. Basic stitch types 19
    - 4 thread overlock mock safety stitch 19
    - Wide 3 thread overlock stitch 19
    - Narrow 3 thread overlock stitch 19
14. How to adjust thread tension 19
    - Suggested tension settings for 4 thread overlock mock safety stitch 20
    - Correct balance of the 4 thread overlock mock safety stitch 20
    - How to balance the 4 thread overlock mock safety stitch 20
    - Suggested tension setting for the 3 thread overlock stitch 21
    - Correct balance of the 3 thread overlock stitch 21
    - How to balance the 3 thread overlock stitch 21
15. How to change threads/tie on method 22
16. How to adjust the stitch length 23
17. How to disengage movable upper knife 23
    - To place movable knife in nonworking position 23
    - To place movable knife in working position 24

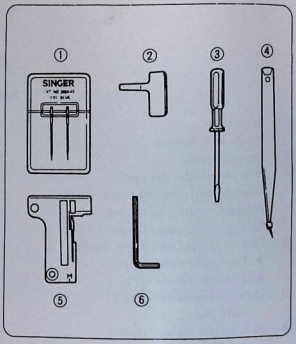
Page

18. Seam guide lines 24
19. How to adjust the overedge seam width 25
20. How to sew a rolled hem 26
    - Machine set up 26
    - Suggested tension settings for standard rolled hem 27
    - Suggested tension settings for upper looper thread wrapped rolled hem 27
    - How to balance the upper looper thread wrapped rolled hem 27
    - Additional information about rolled hemming 28
    - To secure the rolled hem thread chain 28
21. Stitch variations and sewing techniques 29
    - How to sew a flatlock decorative seam 29
    - How to sew an overlock blind hem 31
    - How to sew pin tucks 31
    - Turning square corners 32
    - Pin placement 33
    - Securing the thread chain 33
    - Applying elastic 34
    - How to reinforce a seam 35
    - Braiding by chaining off 35
    - Differential feed (with differential feed machine only) 36
22. How to adjust the presser foot pressure 38
23. Free arm sewing 38
24. Relationship between cloth, thread and needle 39
25. Machine maintenance 40
    - Cleaning the machine 40
    - Oiling the machine 40
    - How to replace the stationary knife 41
    - How to exchange light bulb 42
26. Troubleshooting chart 43
27. Optional accessories and attachments 44
28. Specification 45

1. ACCESSORIES

①	Needle set	1
②	Screwdriver (sheet metal)	1
③	Screwdriver (small size)	1
④	Tweezers	1
⑤	Rolled hemming throat plate	1
⑥	Hex-head wrench	1

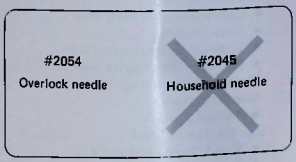
See page 44 for optional accessories.



2. NEEDLE INFORMATION

* This overlock uses a flat shank industrial needle that eliminates the possibility of inserting the needle backwards.

* Do not attempt to use a standard household sewing machine needle of any size or type in this overlock.



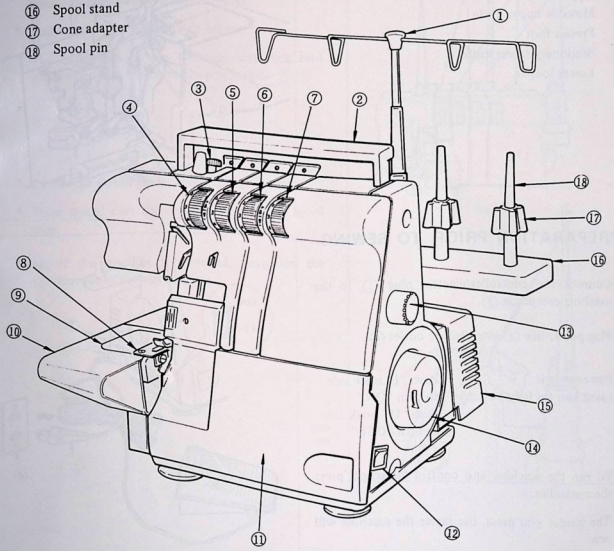
* Singer needle #2054 size 14 is furnished with the machine. Regular point needles (#2054-42) for sewing woven fabrics and ball point needles (2054-06) are available for sewing knits. Both types are available in sizes 10, 12, 14 & 16.

* Refer to the chart on page 39 for selecting the correct needle for your sewing projects.

	Regular Point wovens #2054-42	Ball Point knits #2054-06
Sizes available	10	10
	12	12
	14	14
	16	16

3. PRINCIPAL PARTS

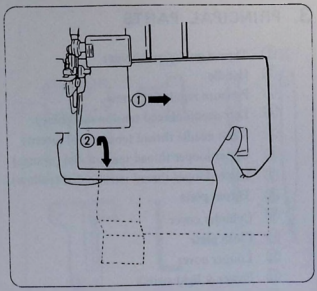
① Thread guides and holder
② Handle
③ Pressure regulating screw
④ Left needle thread tension dial (blue)
⑤ Right needle thread tension dial (green)
⑥ Upper looper thread tension dial (orange)
⑦ Lower looper thread tension dial (yellow)
⑧ Throat plate
⑨ Cylinder cover
⑩ Cloth plate
⑪ Looper cover
⑫ Power & light switch
⑬ Stitch length dial
⑭ Hand wheel
⑮ Motor cover
⑯ Spool stand
⑰ Cone adapter
⑱ Spool pin



4. HOW TO OPEN LOOPER COVER

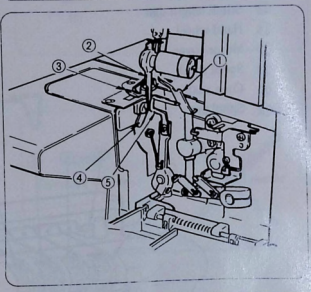
* Push the cover to the right as far as it will go. ①
* Pull cover down toward you. ②

Caution:
Be sure looper cover is closed when sewing.



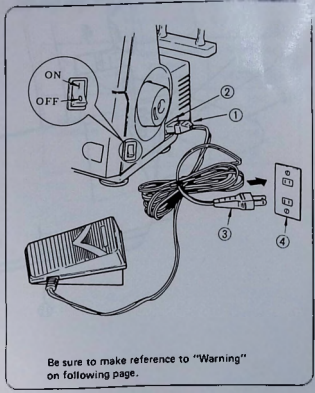
5. PRINCIPAL PARTS BEHIND LOOPER COVER

① Upper looper
② Movable upper knife
③ Presser foot
④ Stationary lower knife
⑤ Lower looper



6. PREPARATION PRIOR TO SEWING

* Connect the controller/electric plug ① to the machine receptacle ②.
* Plug power line ③ into electric outlet ④.
* Power switch (used also for light switch) — Push "I" mark side to turn "ON" Push "O" mark side to turn "OFF"
* To run the machine and control the speed, press the controller.
* The harder you press, the faster the machine will sew.
* To stop the machine from sewing, remove your foot from the controller.



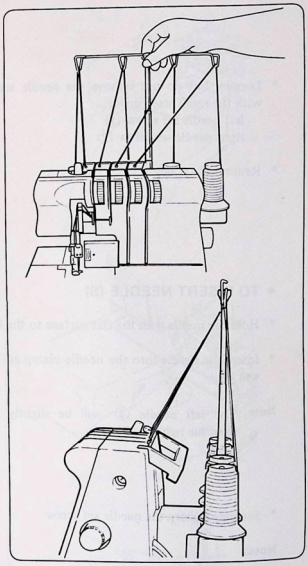
Be sure to make reference to "Warning" on following page.

Warning:

* Be sure that the electrical voltage of the electric outlet (wall receptacle) is the same as the rated voltage of the motor.
* Handle the foot controller with care and avoid dropping it on the floor. Be sure not to place anything on top of it when not in use.
* Disconnect the powerline plug from the electric outlet when changing needles, presser feet or throat plates, or when leaving the machine unattended. This eliminates the possibility of starting the machine by accidentally pressing the controller.
* Before cleaning your machine, disconnect the powerline plug from the electric outlet.

7. SETTING UP THE THREAD GUIDE HOLDER

* This machine is shipped with the thread guide holder in the lowered position.
* Fully extend the thread guide holder.
* The two joints on the telescope will click into place when they are correctly positioned.



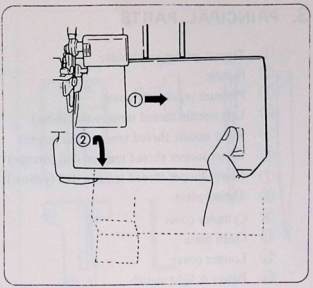
* Center the thread guides above the spool pins.
* Place thread over the cone adapters on the spool pins.

Note: If the machine is threaded, straighten the threads to prevent tangling.

4. HOW TO OPEN LOOPER COVER

* Push the cover to the right as far as it will go. ①
* Pull cover down toward you. ②

Caution:
Be sure looper cover is closed when sewing.



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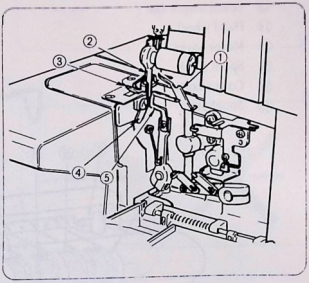
③ Presser foot
④ Stationary lower knife
⑤ Lower looper



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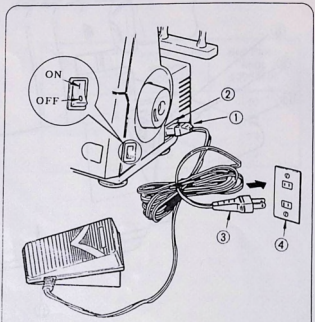

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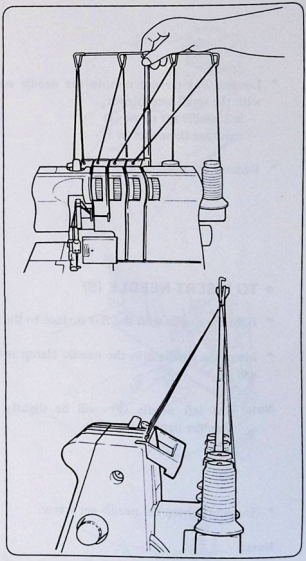


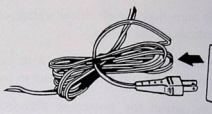
* Center the thread guides above the spool pins.
* Place thread over the cone adapters on the spool pins.

Note: If the machine is threaded, straighten the threads to prevent tangling.

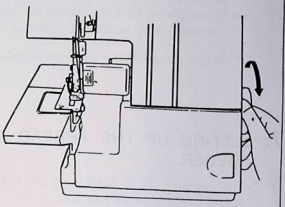
8. HOW TO REMOVE AND INSERT NEEDLES

• TO REMOVE NEEDLE (S)

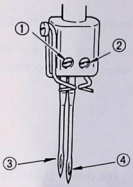
* Be sure to disconnect the machine from the electric outlet before removing needle(s).



* Turn the hand wheel toward you until the needle is at its highest position.



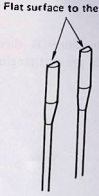
* Loosen, but do not remove the needle set screw with the small screwdriver.
  – left needle set screw ①
  – right needle set screw ②



* Remove the needle(s).

• TO INSERT NEEDLE (S)

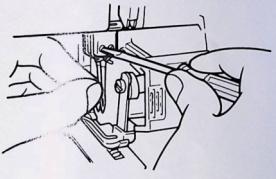
* Hold the needle with the flat surface to the back.



* Insert the needle into the needle clamp as far as it will go.

Note: The left needle ③ will be slightly higher than the right needle ④.

* Securely tighten the needle set screw.



Note:

* This machine uses #2054 needles. Refer to page 4 for additional needle information.

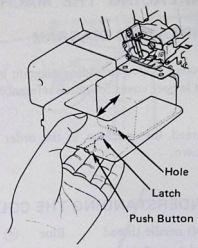
* Remove the cloth plate or the cylinder cover if you find it difficult to remove and replace the needle.

9. HOW TO REMOVE AND REPLACE CLOTH PLATE

* Remove cloth plate for free arm sewing (tublar work)

* To remove, pull cloth plate to the left while pressing the push botton on underside of cloth plate upward.

* To replace, guide latch on cloth plate into hole in cylinder cover and push cloth plate to the right as far as it will go.

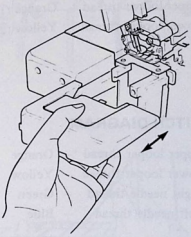


10. HOW TO REMOVE AND REPLACE CYLINDER COVER

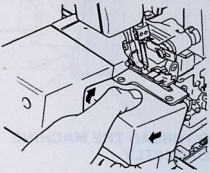
* Removing the cylinder cover exposes the lower looper for easy threading and cleaning of the machine.

* Cylinder cover can be removed together with the cloth plate by pulling the cylinder cover to the left.

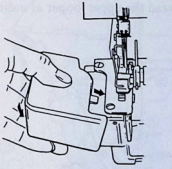
* To replace the cylinder cover together with the cloth plate, push cloth plate with the cylinder cover attached, to the right as far as it will go.



* To remove the cylinder cover when cloth plate is not fitted on the machine, it can be removed easily by lifting it upward while pulling to the left.



* To replace only the cylinder cover, place tab on top of cylinder cover under the throat plate and press cover downward and to the right.



Warning:

Do not hold the cylinder cover when lifting or carrying the machine.

Caution:

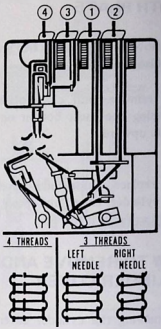
Be sure cylinder coveris replaced when sewing.

11. THREADING THE MACHINE

• THREADING DIAGRAM

* A color coded threading diagram is located inside the looper cover for quick reference.

* Thread the machine in the order ① to ④ as shown.

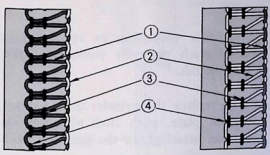


• UNDERSTANDING THE COLOR CODE

* Left needle thread – Blue ④
* Right needle thread – Green ③
* Upper looper thread – Orange ①
* Lower looper thread – Yellow ②

• STITCH DIAGRAM

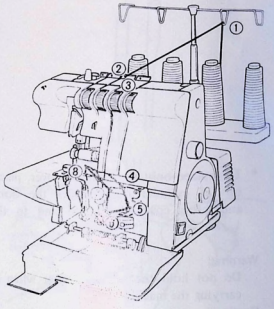
* Upper looper thread – Orange ①
* Lower looper thread – Yellow ②
* Right needle thread – Green ③
* Left needle thread – Blue ④



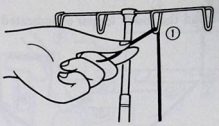
• TO THREAD THE MACHINE CORRECTLY

(1) Threading the Upper Looper (Orange)

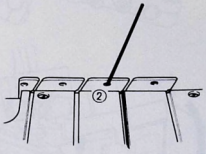
* Thread the upper looper as indicated ①~⑧.



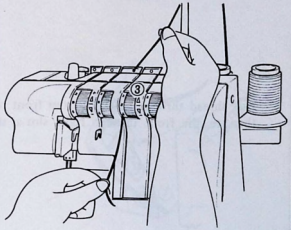
* Pass thread from back to the front through the thread guide ① .



* Pass thread through hole ② from front to back, then to the front through right slot as shown.



* While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs.

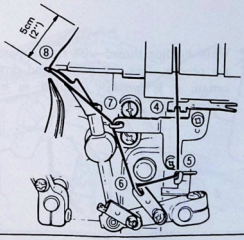


* Thread the looper area of the machine following the orange color coded thread guides. (④~⑦)

* Thread the hole in the upper looper from front to back ⑧.

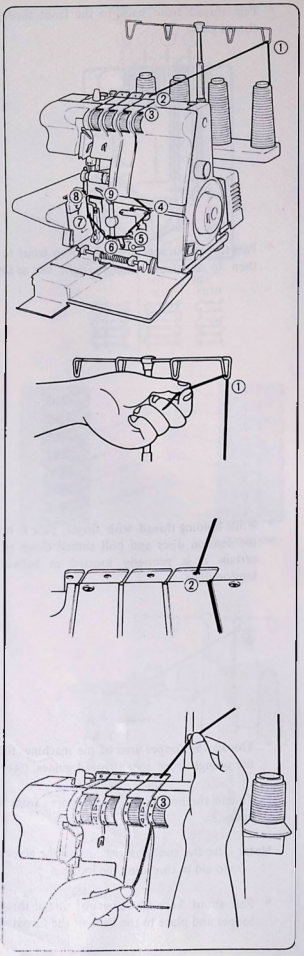
Note: Use the tweezers provided in the accessory set to aid in threading the looper.

* Pull about 5 cm (2 inches) of thread through the looper and place to the back of the throat plate.



(2) Threading the Lower Looper (Yellow)

* Thread the lower looper as indicated ① ~ ⑨ .

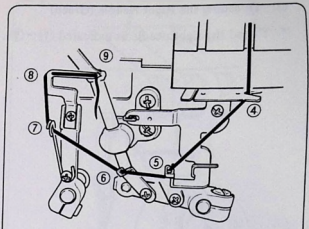


* Pass thread from back to the front through the thread guide ① .

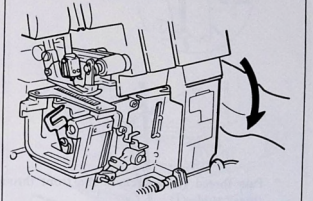
* Pass thread through hole ② from front to back, then to the front through right slot as shown.

* While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs.

* Thread the looper area of the machine following the yellow color coded thread guides ④~⑨.

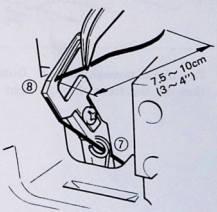


* Remove the cylinder cover (page 9) to expose the lower looper for threading.
* Turn the hand wheel toward you until the lower looper is at the far left.

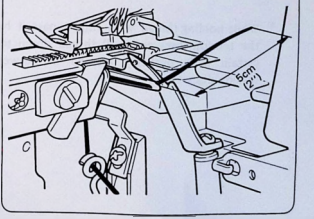


* Pull 7.5 ~ 10 cm (3 ~ 4 inches) of thread through thread guide ⑦.
* Insert the thread through the left end of the lower looper. ⑧
* Drop the thread.

Note: Use the tweezers that are in the accessory set to aid in threading the looper.

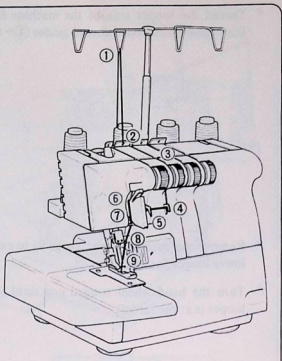


* Turn the hand wheel toward you until the lower looper is at the far right.
* Pick up the thread and pass it through the hole in the end of the looper ⑨.
* The thread should be positioned in the groove of the lower looper.
* Pull about 5 cm (2 inches) of thread through the looper and place it over the top of the upper looper and to the back of the throat plate.

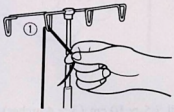


(3) Threading the Right Needle (Green)

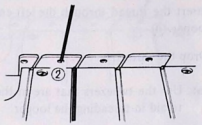
* Thread the right needle as indicated ① ~ ⑨ .



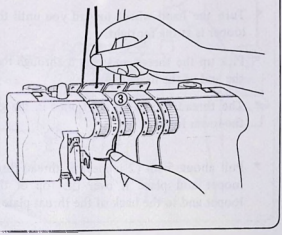
* Pass thread from back to the front through the thread guide ① .



* Pass thread through hole ② from front to back, then to the front through right slot as shown.

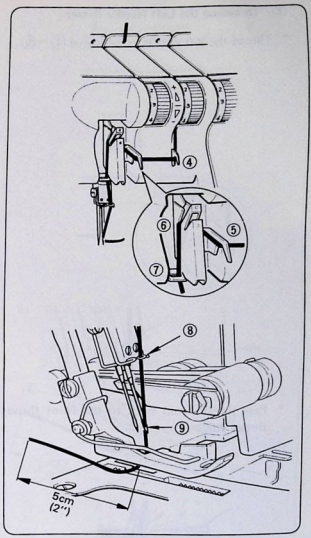


* While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs.



* Continue to thread points ④ ~ ⑧.

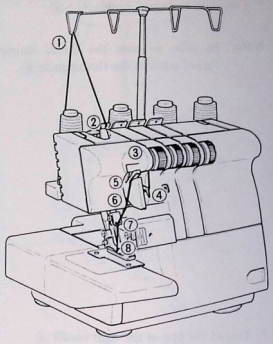
Note: Be sure to pass the thread through upper thread path of the thread guide ⑥.



* Thread the eye of the right needle ⑨.
* The needle may be easier to thread when the upper knife is disengaged and placed in the non-operating position. (see page 23).
  – Be sure to engage knife before sewing.
* Place the thread to the back, under the presser foot.

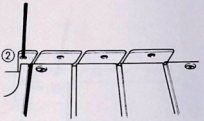
(4) Threading the Left Needle (Blue)

* Thread the left needle as indicated ①~⑧.

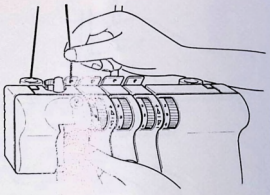


* Pass thread from back to the front through the thread guide ①.

* Pass thread through hole ② from front to back, then to the front through right slot as shown.

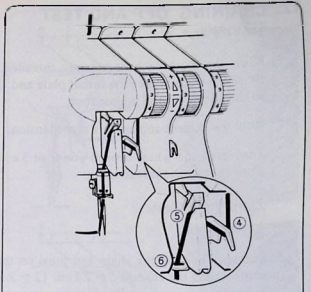


* While holding thread with finger, pass it between the tension discs and pull thread down to make certain it is properly located in between the tension discs.



* Continue to thread points ④~⑦.

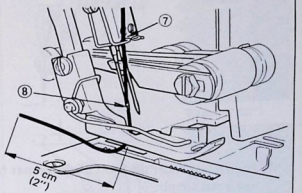
Note: Be sure to pass the thread through lower thread path of the thread guide ⑤.



* Thread the eye of the left needle. ⑧

* The needle may be easier to thread when the upper knife is disengaged and placed in the non-operating position (see page 17).
  – Be sure to engage knife before sewing.

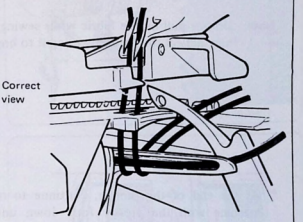
* Place the thread to the back, under the presser foot.



• IMPORTANT THREADING INFORMATION

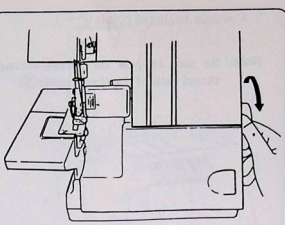
* Always thread the needle(s) last to prevent mis-threading the lower looper.

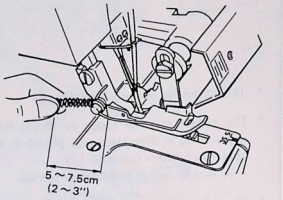
* If the lower looper should come unthreaded.
  1) Unthread the needle(s)
  2) Thread the lower looper
  3) Thread the needle(s)



12. CHAINING OFF AND TEST SEWING

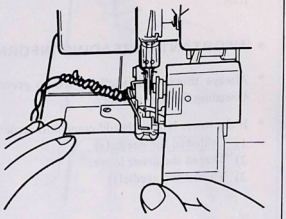
* When the machine is completely threaded, bring all of the threads over the throat plate and slightly to the left under the presser foot.
* Hold the threads and apply a slight tension.
* Turn the hand wheel toward you 2 or 3 complete turns to start the thread chain.
* Lower presser foot.
* Continue holding the chain and press on the foot control until the chain is 5～7.5 cm (2～3 inches) in length.





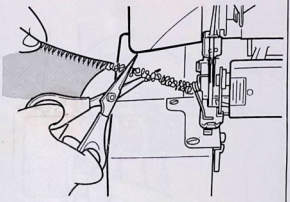
* Place fabric under the front of the presser foot and sew a test sample.

Note: Do not pull on the fabric while sewing as this may deflect the needle, causing it to break.



* At the end of the sample, continue to run the machine with the presser foot down until the chain reaches 5～7.5 cm (2～3 inches) in length.
* Clip the thread chain.

Note: Anytime you have rethreaded the machine always chain off and sew a test sample to test tensions and make adjustments as necessary.



13. BASIC STITCH TYPES

• 4 THREAD OVERLOCK MOCK SAFETY STITCH

* This machine is a four-thread overlock that uses two needles and two loopers to create a 5.7mm (7/32 inch) wide four-thread mock safety stitch.

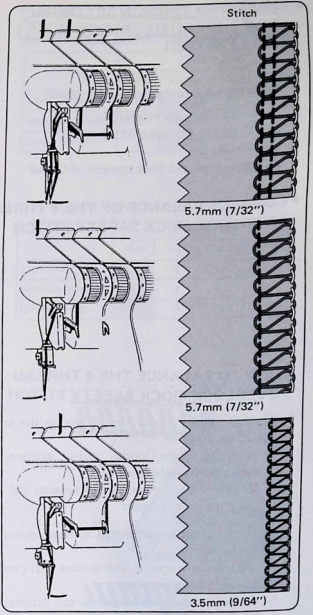
• WIDE 3 THREAD OVERLOCK STITCH

* When the right needle is removed a wide 5.7mm (7/32 inch) three-thread stitch is sewn.

• NARROW 3 THREAD OVERLOCK STITCH

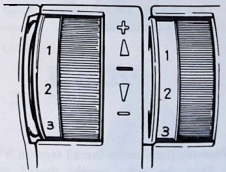
* When the left needle is removed a narrow 3.5mm (9/64 inch) wide three-thread stitch is sewn.

Note: The stitch width can be increased by adjusting the knife (page 25).
- The left needle stitch width can be increased from 5.7mm (7/32inch) to 7.2mm (9/32inch).
- The right needle stitch width can be increased from 3.5mm (9/64inch) to 5.0mm (13/64inch).



14. HOW TO ADJUST THREAD TENSION

* The thread tension dials on this machine are a one-turn system.
* As the number increases on the dial the thread tension becomes tighter.
  0 = lowest tension
  9 = highest tension
* Be sure the machine is correctly threaded otherwise proper thread tension cannot be obtained.
* When making adjustments to balance the tensions, it is recommended that
  1) Adjustments be made in no greater than half a number at a time.
  2) Sew a test sample after each adjustment.



Current Setting is 1½.
Adjustment would be to 1 or 2 for ½ turn adjustment.

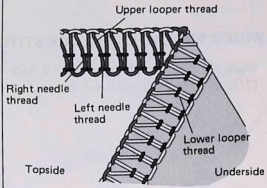
• SUGGESTED TENSION SETTINGS FOR 4 THREAD OVERLOCK MOCK SAFETY STITCH

Fabric	Tension Dial			
	Blue	Green	Orange	Yellow
Light weight	3	2.5	1	2
Medium weight	4	3	1	2
Heavy weight	5	4	1.5	2.5

Note:

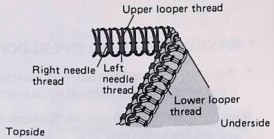
* These are suggested tension settings only.
* Tension settings are effected by
  1) Type and thickness of fabric
  2) Needle size
  3) Size, type and fiber content of thread

• CORRECT BALANCE OF THE 4 THREAD OVERLOCK MOCK SAFETY STITCH

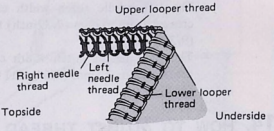


• HOW TO BALANCE THE 4 THREAD OVERLOCK MOCK SAFETY STITCH

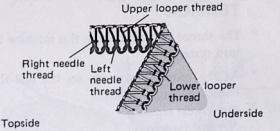
* When the upper looper thread lies on the underside of the fabric
  – Turn the upper looper thread tension dial (orange) to a higher number
  – Or turn lower looper thread tension dial (yellow) to a lower number.



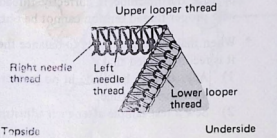
* When the lower looper thread appears on the top of the fabric
  – Turn lower looper thread tension dial (yellow) toward a higher number
  – Or turn the upper looper thread tension dial (orange) toward a lower number.



* When the left needle thread tension is too loose
  – Turn the left needle thread tension dial (blue) toward a higher number.



* When the right needle thread tension is too loose
  – Turn the right needle thread tension dial (green) toward a higher number.



• SUGGESTED TENSION SETTINGS FOR THE 3 THREAD OVERLOCK STITCH

Note:

* These are suggested tension settings only.
* Tension settings are effected by
  1) Type and thickness of fabric
  2) Needle size
  3) Size, type and fiber content of thread.

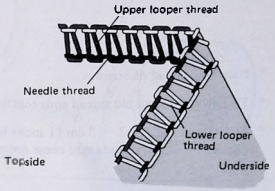
Left Needle/Wide 3 Thread Overlock Stitch

Fabric	Tension Dial			
	Blue	Green	Orange	Yellow
Light weight	3		1	2
Medium weight	4		1	2
Heavy weight	5		1.5	2.5

Right Needle/Narrow 3 Thread Overlock Stitch

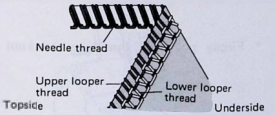
Fabric	Tension Dial			
	Blue	Green	Orange	Yellow
Light weight		3	1.5	2
Medium weight		4	1.5	2
Heavy weight		5	2	2.5

• CORRECT BALANCE OF THE 3 THREAD OVERLOCK STITCH

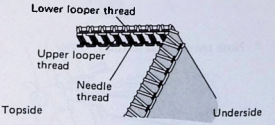


• HOW TO BALANCE THE 3 THREAD OVERLOCK STITCH

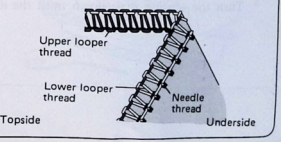
* When the upper looper thread lies on the underside of the fabric
  – Turn the upper looper thread tension dial (orange) to a higher number.
  – Or turn the lower looper thread tension dial (yellow) to a lower number.



* When the lower looper thread appears on the top
  – Turn the lower looper thread tension dial (yellow) toward a higher number.
  – Or, turn the upper looper thread tension dial (orange) to a lower number.

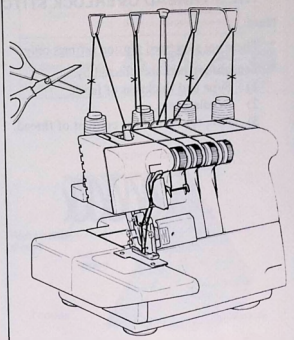


* When the needle thread is too loose, Turn the needle tension dial (blue or green) to a higher number.

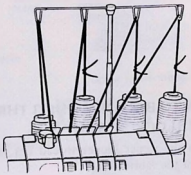


15. HOW TO CHANGE THREADS/TIE ON METHOD

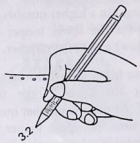
* To change thread type or color, clip thread near the spool.



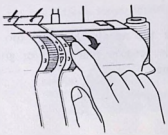
* Place new thread on stand.
* Tie new thread and old thread ends together.
* Clip thread tails to 2 ~ 3 cm (1 inch) length. If clipped too short, threads may come untied.



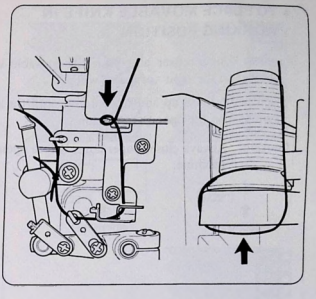
* Firmly pull both thread to test knot security.



* Note tension dial settings.
* Turn the tension dials down until the dial stops.

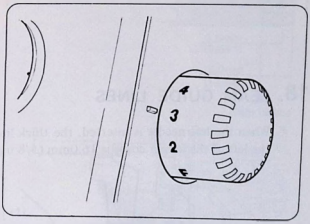


* Pull the threads through the machine one at a time.
* If threads do not pull easily, check for tangles on thread guides or looping under thread stand.



* When pulling thread through the needle, STOP when the knot is in front of the needle.
* Cut the thread, and insert it through the needle.
* Return tension dials to previous settings.

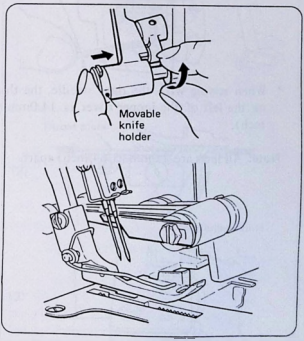
16. HOW TO ADJUST THE STITCH LENGTH



* The stitch length dial should be set on the 3mm (7/64 inch) setting for most sewing conditions.
* Adjust the stitch length to 4mm (5/32 inch) when sewing heavy weight fabrics.
* Adjust the stitch length to 2mm (5/64 inch) when sewing light weight fabrics to obtain excellent seams without puckering.

17. HOW TO DISENGAGE MOVABLE UPPER KNIFE

• TO PLACE MOVABLE KNIFE IN NONWORKING POSITION



* Be sure the machine is disconnected from the power source.
* Open looper cover (page 6).
* Push the movable knife holder to the right as far as it will go.
* Turn the knob away from you until the knife clicks into a horizontal position.

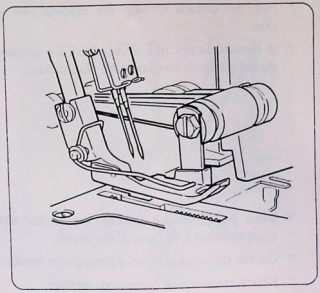
Note: If the knife stops in the up position

* Turn the hand wheel toward you until the knife clears the top of the machine.
* Continue to rotate the knife to the horizontal position.

• TO PLACE MOVABLE KNIFE IN WORKING POSITION

* Open looper cover and push the movable knife holder to the right as far as it will go.
* Turn the knob up and toward you until the knife clicks into the operating position.

Caution: Always close looper cover before operating machine.

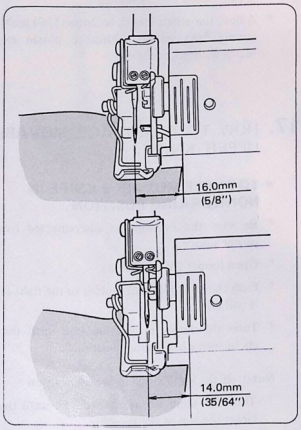


18. SEAM GUIDE LINES

* When the left needle is inserted, the thick line on the left of the looper cover is 16.0mm (5/8 inch).

* When sewing with the right needle, the thick line on the left of the looper cover is 14.0mm (35/64 inch).

Note: All lines are 2.0mm (5/64 inch) apart.

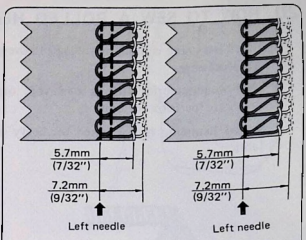


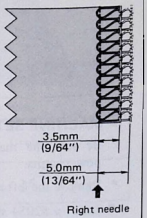
19. HOW TO ADJUST THE OVEREDGE SEAM WIDTH

* The machine is set to sew the four-thread stitch and three-thread left needle position stitch at a width of 5.7mm (7/32 inch).

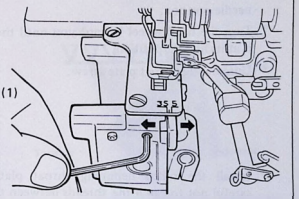
* The machine is set to sew the three-thread right needle position stitch at a width of 3.5mm (9/64 inch).

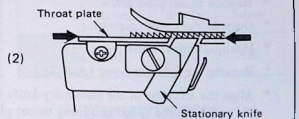
* The 5.7mm (7/32 inch) setting can be increased to 7.2mm (9/32 inch) and the 3.5mm (9/64 inch) setting can be increased to 5mm (13/64 inch) by adjusting the stationary knife.



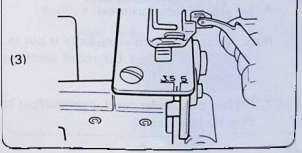


* Be sure the machine is disconnected from the power source.
* Open the looper cover (page 6).
* Disengage the movable upper knife (page 23).
* Remove the cylinder cover (page 9).
* Loosen the 2 stationary knife holder set screws with the hex-head wrench provided in the accessories. (1)
* Move the stationary knife holder to the right to increase the stitch width, or to the left to decrease the stitch width.
* Be sure to align the cutting edge of the stationary knife level with the top surface of the throat plate. (2)





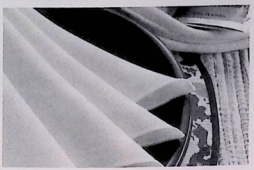
* Tighten set screws. (3)
* Replace the cylinder cover (page 9).
* Return the movable knife to its original position (page 24).
* Test sew and adjust tensions as necessary to compensate for the increase or decrease in stitch width.



Note: Do not set the overedge seam width below 3.5mm (9/64 inch).

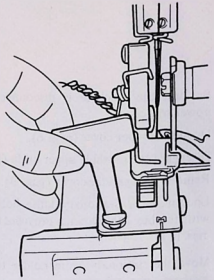
20. HOW TO SEW A ROLLED HEM

* Rolled hemming is done by rolling and overedging the fabric edge.
* Light weight fabrics such as lawn, voil, organdy, crepe, etc. perform the best.
* Rolled hemming is not suited for heavy or stiff fabrics.



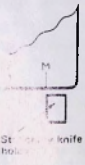
• MACHINE SET UP

* Be sure the machine is disconnected from the power source.
* Remove the left needle.
* Insert a #2054 size #10 or #14 needle in the right needle position.
* Turn the hand wheel toward you until the needle is at its highest position.
* Unscrew the throat plate screw.



* Install the rolled hemming throat plate being careful not to catch the threads between the plate and the machine.
* Replace throat plate screw.
* Open looper cover (page 6).
* Disengage upper knife (page 23).
* Remove the cylinder cover (page 9).
* Align the left edge of the stationary knife with the "M" mark on the rolled hemming throat plate.
* See page 25 for adjustment.

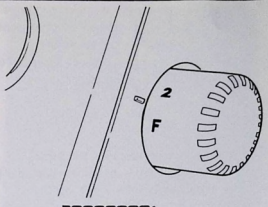
Note: Be sure the stationary knife is not in contact with the edge of the rolled hemming throat plate.



* Replace the cylinder cover, engage upper knife and close the looper cover.

* Set the stitch length dial to "2~F" and a fine seam will be sewn.

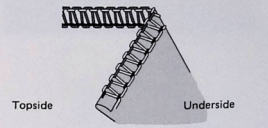
* This machine can sew two types of rolled hems.



• SUGGESTED TENSION SETTINGS FOR STANDARD ROLLED HEM

* Always sew a test sample and adjust tension balance if neccessary.

* Adjust tension balance the same as for a narrow three-thread overlock stitch (page 21).



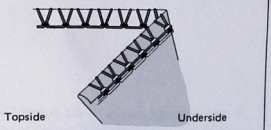
Tension Dial			
Blue	Green	Orange	Yellow
	3.5	3.5	2.5

• SUGGESTED TENSION SETTINGS FOR UPPER LOOPER THREAD WRAPPED ROLLED HEM

* For medium and heavy weight fabrics that are difficult to roll.

* Always sew a test sample, and if neccessary, adjust tension balance as instructed below.

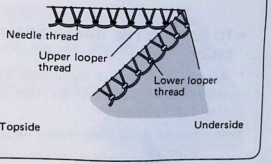
* For a beautiful rolled hem thread the upper looper with wooly nylon and the needle and lower looper with lightweight regular thread.



Tension Dial			
Blue	Green	Orange	Yellow
	3.5	1	5.5

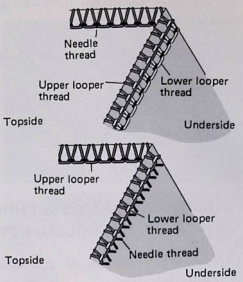
• HOW TO BALANCE THE UPPER LOOPER THREAD WRAPPED ROLLED HEM

* When the upper looper thread is too loose
  – Turn the upper looper thread tension dial (orange) to a higher number.



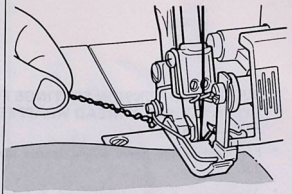
* When the lower looper thread is too loose
  - Turn the lower looper thread tension dial (yellow) toward a higher number.
  - Or, turn the upper looper thread tension dial (orange) to a lower number.

* When the needle thread is too loose
  - Turn the needle thread tension dial (green) to a higher number.



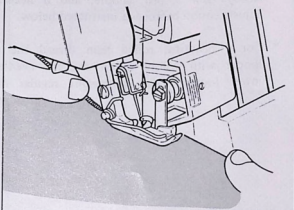
• ADDITIONAL INFORMATION ABOUT ROLLED HEMMING

* Hold the thread chain when you begin sewing to keep it from curling into the seam.



* Place a slight tension on the material in the sewing direction and a finer seam finish can be obtained.

* The minimum overedge stitch width that can be obtained for rolled hemming is approximately 1.5 mm (1/16 inch) since the cutting width cannot be set below 3.5mm (9/64 inch).



• TO SECURE THE ROLLED HEM THREAD CHAIN

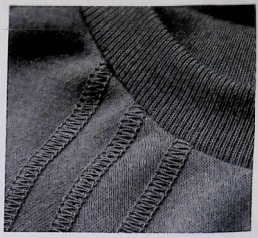
* Apply a small drop of liquid seam sealant to the end of the seam. Allow to dry, then cut the chain close to the stitches.

Note: Test the liquid seam sealant on fabric scraps before use.

21. STITCH VARIATIONS AND SEWING TECHNIQUES

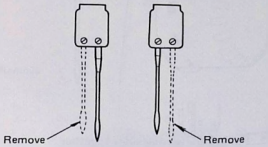
• HOW TO SEW A FLATLOCK DECORATIVE SEAM

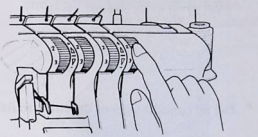
* A flatlock stitch is achieved by adjusting the tension of the three-thread overlock stitch, sewing the seam and pulling the fabric apart to flatten the seam.
* The flatlock stitch can be used as a construction and decorative stitch or for ornamentation only.



(1) Machine Set Up

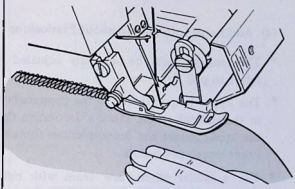
* Remove the left or right needle.
* Begin with the machine threaded and tension balanced for the three-thread overlock stitch (page 21).
* Loosen the needle thread tension (green or blue) generously.
* Loosen the upper looper thread tension (orange) slightly.
* Tighten the lower looper thread tension (yellow) generously. (8-9)



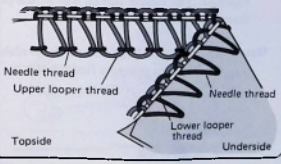


(2) Flatlocking a Seam

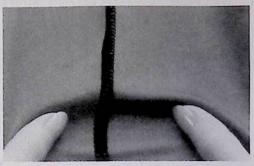
* Place the fabric wrong sides together to sew a decorative stitch on the right side of the garment.
* Sew the seam, trimming the excess fabric.



* The needle thread (green or blue) will form a V on the underside of the fabric.
* The lower looper thread will pull into a straight line at the fabric edge.

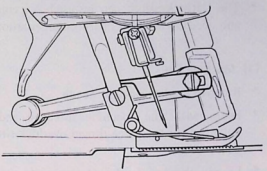


* Pull on opposite sides of the seam to pull the stitches flat.

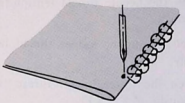


(3) Decorative Flatlocking

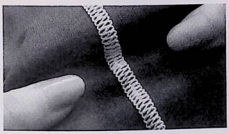
* Place the movable uper knife in the nonworking position (page 23). The fabric is not trimmed on this stitch.



* Fold fabric wrong sides together.
* Position the fabric so the seam is sewn with part of the stitch extending off the fabric.

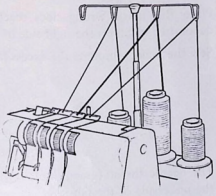


* Pull on opposite sides of the stitch to flatten.

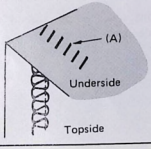


(4) Additional Information about Flatlocking

* The tensions must be correctly adjusted for the fabric to pull flat.
* The upper looper thread is the prominent thread in the flatlock stitch. Place a decorative thread in the upper looper and inconspicuous threads in the lower looper and needle.
* For a ladder stitch, sew seam with right sides together. The needle thread will be the prominent thread that creates the ladder (A).



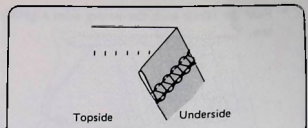
Note: An optional Edge Guide is available (page 44) to aid in sewing a flatlock stitch.



• HOW TO SEW AN OVERLOCK BLIND HEM

The excess fabric is trimmed and the hem is sewn and the raw edges are overlocked in one operation.

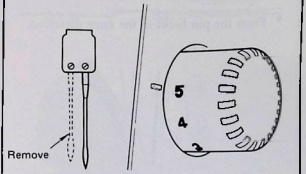
The overlock blind hem is best suited for sewing knit wear. It provides a durable finish that is almost invisible.



* Remove the left needle and adjust machine for a narrow three-thread overlock stitch.

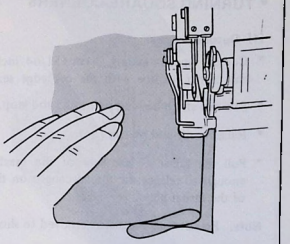
Note: The three-thread flatlock stitch can also be used.

* Set the stitch length dial at 4 ~ 5.



* Fold the hem to the wrong side of the fabric, then back to the right side with 6mm (1/4") beyond the fold.

* Stitch on the extended hem edge, allowing the machine needle to barely catch the edge of the fold.



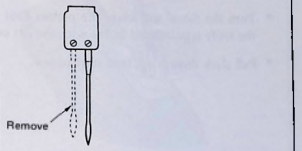
Note: An optional blind hem foot (ULTRA HEM FOOT) is available. (page 45)

• HOW TO SEW PIN TUCKS

Sew decorative pin tucks on the fabric before cutting out the garment.

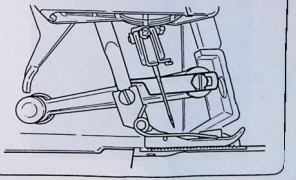
* Remove the left needle and adjust machine for a narrow three-thread overlock stitch.

Note: The rolled hem stitch can also be used for this technique.

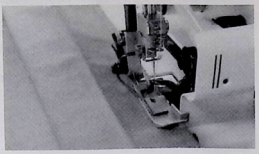


* Place the movable upper knife in the nonoperating position (page 23).

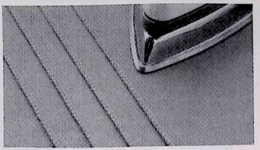
* Mark the fabric with the desired number of pin tucks using a water soluble fabric marker.



* Fold the fabric with the wrong sides together and sew.



* Press the pin tucks in the same direction.

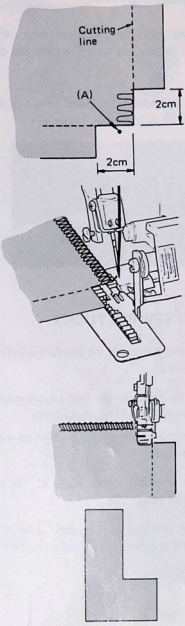


• TURNING SQUARE CORNERS

(1) Outside Corner

* Cut out approximately 2 cm (51/64 inch) from the corner, in line with the overedge seam edge.
* Sew one stitch beyond point (A) and stop.
* Raise needle and presser foot.
* Pull the fabric to the rear of the machine just enough to release the thread caught on the finger of the throat plate.

Note: Presser foot has been removed to show detail.

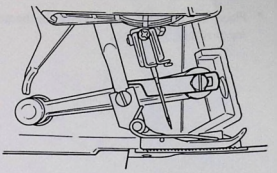


* Turn the fabric and lower the presser foot so that the knife is positioned in line with the cut edge.
* Pull slack threads up, then start to sew.

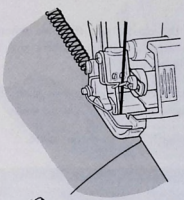
(2) Inside Corner

* Cut fabric at seam e

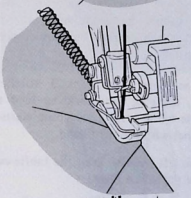
* Place movable upper knife in nonoperating position (page 23).



* Stitch on cut edge of fabric.
* Stop sewing before you reach the corner and fold the fabric to the left to straighten the corner.



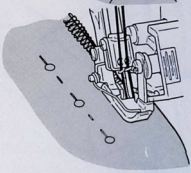
* Continue to sew slowly holding the fabric edge in a straight line moving the fold as you sew.



• PIN PLACEMENT

* Insert pins to the left of the presser foot. The pins will be easy to remove and are away from the cutting action of the knives.

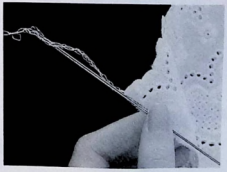
Caution: Sewing over pins will damage and/or destroy the cutting edge of the knives.



• SECURING THE THREAD CHAIN

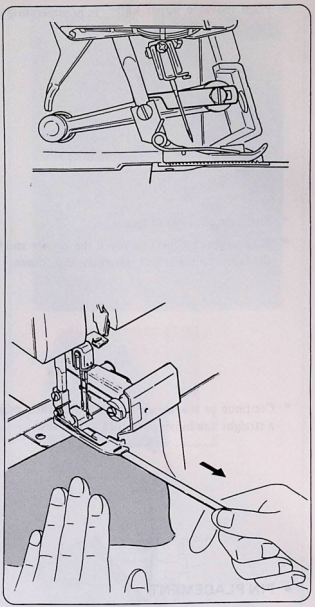
* Thread a large eye, hand sewing needle (such as a tapestry needle) with the thread chain.
* Insert the needle into the end of the seam to secure thread.

Note: To secure a rolled hem thread chain see page 27.



• APPLYING ELASTIC

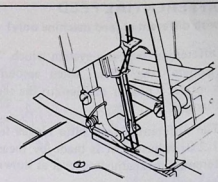
* Place the movable upper knife in the nonoperating position. (page 23)

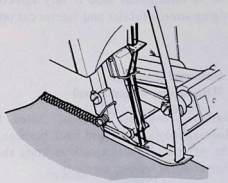


* Divide the elastic and the area where the elastic will be attached into quarters and mark with a watersoluble marker.
* Lay elastic on the wrong side of the fabric making sure elastic and fabric edges are even.
* Line up with edge of throat plate.
* Elastic should be sewn using the three-thread overlock stitch or the four-thread overlock mock safety stitch.
* After securing with 2 ~ 3 stitches, continue sewing, allowing the fabric to feed through the machine while gently stretching elastic (a quarter at a time) with the right hand.
* Use the left hand to keep the fabric even with the edge of the throat plate.

• HOW TO REINFORCE A SEAM

* Inserting twill tape while overedge sewing will stabilize the seam.
* Insert the tape through the hole in the front of the foot.
* Position the tape under the foot to the back of the machine and sew the garment seam.

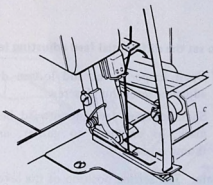


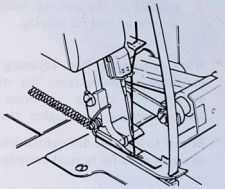


* The tape is attached as the seam is sewn.

• BRAIDING BY CHAINING OFF

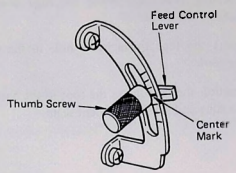
* Place the movable upper knife in nonoperating position.
* Insert filler cord such as yarn or twill tape through the hole in the front of the foot.
* Position the filler cord under the foot and chain off the desired length.
* Chained off braids can be used individually or woven into 3 or 4 ply braids.





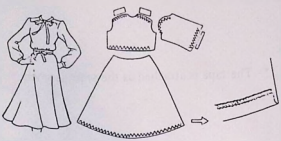
• DIFFERENTIAL FEED
(with differential feed machine only)

* Differential feed is a system which "stretches" or "gathers" the fabric, when amount of feed of front feed dog in relation to the rear feed dog is changed.
* The differential feed ratio ranges from 1:0.77 ~ 1:2.0. Adjustment is made by means of the differential feed adjusting lever as shown.
* Use of differential feed is very effective in overedging stretch fabrics and fabrics cut on the bias.



(1) Gathered Overedge
(Use regular throat plate)

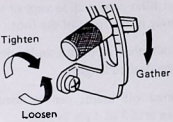
* Gathered overedge is most suited for shirring sleeves, yokes, front and back bodices, skirt hems, etc. in stretch fabrics such as knits and jersey before assembling into garment.



To set the differential feed adjusting lever

* Open looper cover and loosen differential feed adjusting lever thumb screw.
* Slide adjusting lever downward below the center mark, as required, to gather, and tighten the thumb screw.

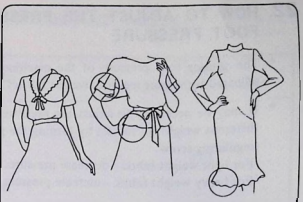
Note: The setting position of the lever will differ depending on the material being sewn and the amount of feed for shirring.



* When differential feed adjusting lever is set to maximum gathering ratio, the stitch length will automatically change to 3mm (7/64inch) if previous setting was higher than setting "3".
* Be sure to reset the differential feed adjusting lever to center mark for normal overedge stitching.

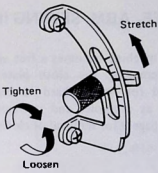
(2) Stretch overedge
(Use regular or rolled hemming throat plate)

* Stretch overedge is ideal for sewing decorative collars, sleeves, skirt hems, etc. on loosely knit and woven fabrics.



To set the differential feed adjusting lever

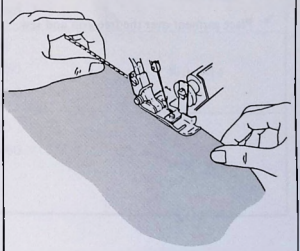
* Open looper cover and loosen differential feed adjusting lever thumb screw.
* Slide adjusting lever upward above the center mark, as required, to stretch, and tighten the thumb screw.



* To sew a seam, apply gentle tension to the fabric by holding the seam lightly in front and back of the presser foot.

Note: If amount of "stretch" is not correctly set in relation to the fabric being sewn, the fabric is apt to shift away from the needle resulting in improperly sewn overedge seam. In such case, reset differential feed adjusting lever closer to the center mark.

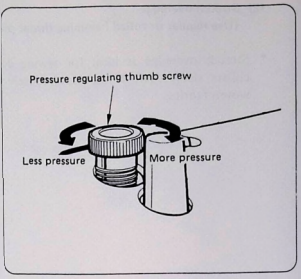
* Be sure to reset the differential feed adjusting lever to center mark for normal overedge stitching.



22. HOW TO ADJUST THE PRESSER FOOT PRESSURE

* The presser foot pressure of the machine is pre-adjusted for sewing medium weight fabrics.

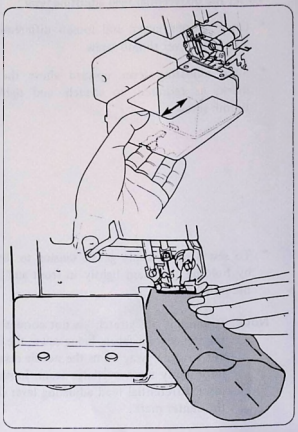
* It may be necessary to adjust the pressure to sew different weights of fabrics by turning the pressure regulating screw.
  For light weight fabric – decrease pressure.
  For heavy weight fabric – increase pressure.



23. FREE ARM SEWING (tubular work)

* This machine becomes a free arm machine simply by removing the cloth plate and is especially suited for sewing hard to reach garment areas such as armholes and overcasting trouser cuffs. (See page 9 for removal of cloth plate)

* Place garment over the free arm and sew.



24. RELATIONSHIP BETWEEN CLOTH, THREAD AND NEEDLE

Type of Fabric	Type of Thread	Needle Singer Cat. No. 2054
Light Weight Lawn, Organdy, Voil, Crepe, etc.	Cotton #100 Silk #100 Spun #80 – #90 Tetron #80 – #100	#10
Medium Weight Muslin, Sheersucker, Satin, Gabardine, Broadcloth, etc.	Cotton #60 – #80 Silk #50 Spun #60 – #80 Tetron #60 – #80	#10, #14
Heavy Weight Oxford, Denim, Tweed, Corduroy, Serge	Cotton #40 – #60 Silk #40 – #60 Spun #60 – #80 Tetron #50 – #80	#14, #16
Knit Tricot	Spun #80 – #90 Tetron #60 – #80	#10, #14
Jersey	Spun #60 – #80 Tetron #60 – #80 Cotton #60 – #80	#10, #14
Wool (woven, knit)	Spun #60 – #80 Tetron #50 – #60 Woolly nylon Woolly tetron	#10, #14

Note: For additional needle information see page 4.

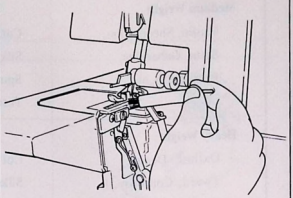
25. MACHINE MAINTENANCE

* An overlock requires more maintenance than a conventional machine mainly due to two reasons.
  1) A lot of lint is produced due to the cutting action of the knives.
  2) An overlock runs at a very high speed and needs to be oiled frequently to lubricate the internal working parts.

• CLEANING THE MACHINE

Danger: Before cleaning your machine, disconnect power line plug from the wall receptacle.

* Clean the lint from the looper and knife area often with a dry lint brush.

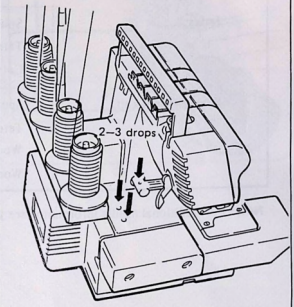


• OILING THE MACHINE

Danger: Before lubricating your machine, disconnect power line plug from the wall receptacle.

* The oiling points shown in the diagram, should be oiled periodically.

Note: Use sewing machine oil. Do not use any other oil or damage could result.

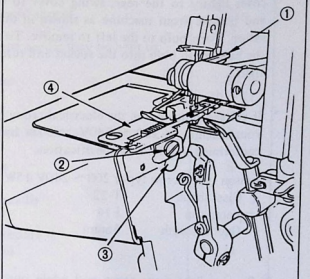


• HOW TO REPLACE THE STATIONARY KNIFE

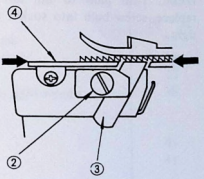
Danger: Before replacing the stationary knife, disconnect power line plug from the wall receptacle.

* The stationary knife should be changed when it becomes dull.
* The stationary knife can be replaced according to the directions provided, however if there are any difficulties experienced, consult your Singer representative to make the adjustments.

* Be sure that the power line plug is disconnected from the electric source.
* Open the looper cover and set the movable upper knife ① in the nonoperating position (page 23).
* Loosen the stationary knife clamping plate set screw ② and remove the stationary knife ③ .



* Place a new stationary knife in the groove of the stationary knife holder, align the cutting edge level with the top surface of the throat plate ④.
* Tighten stationary knife clamping plate set screw ② .
* Return the movable upper knife ① to its operating position.



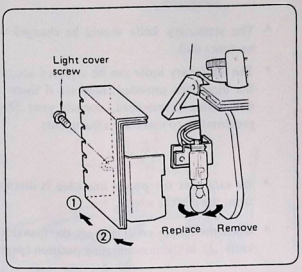
• HOW TO EXCHANGE LIGHT BULB

Danger: Always unplug before relamping.

* Light bulb is available at your Singer shop. Take old bulb to the Singer shop and ask for same bulb.

* If voltage indicated on the electrical rating plate of your machine is 110 ~ 127V, ask for light bulb conforming to following specification.

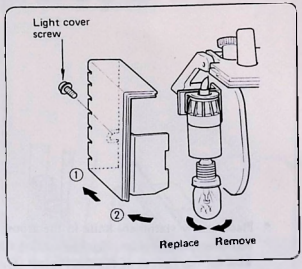
Bayonet type 110 ~ 127V 15W
- Glass shape T-20
- Lamp cap BA 15D/19
- Overall length 48mm



* Remove light cover screw and while pushing the cover lightly to the rear, swing cover to the left and remove from machine as shown in the illustration. Turn bulb to the left to remove. To replace the bulb, push bulb into the socket and turn to the right.

* If voltage indicated on the electrical rating plate of your machine is 200 ~ 240V, ask for light bulb conforming to following specification.

Edison type (screw type) 200 ~ 240V 15W
- Glass shape T-22
- Lamp cap E14
- Overall length 56mm



* Remove light cover screw and while pushing the cover lightly to the rear, swing cover to the left and remove from machine as shown in the illustration. Turn bulb to the left to remove. To replace, screw bulb into socket turning it to the right.

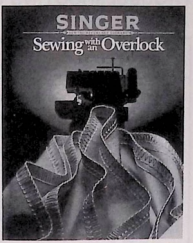
26. TROUBLESHOOTING CHART

Problem	Solution	Page
Fabric does not feed well	– Lengthen stitch length	23
	– Increase presser foot pressure for heavy weight fabric	38
	– Decrease presser foot pressure for light weight fabric	38
Needle breaks	– Insert needle correctly	8
	– Do not pull fabric while sewing	18
	– Tighten needle set screw	8
	– Use a larger needle on heavy fabrics	39
Thread breaks	– Check threading	10 ~ 17
	– Check for tangled or caught thread	22
	– Insert needle correctly	8
	– Insert new needle, current needle may be bent or have a blunt point	8
	– Use a high quality thread	39
	– Loosen thread tension	19 ~ 21
Stitches skip	– Insert new needle, current needle may be bent or have a blunt point	8
	– Tighten needle set screw	8
	– Insert needle correctly	8
	– Change type or size of needle	4
	– Check threading	10 ~ 17
	– Increase presser foot pressure	38
	– Use a high quality thread	39
Irregular stitches	– Balance thread tension	19 ~ 21
	– Check for tangled or caught thread	22
	– Check threading	10 ~ 17
Fabric puckers	– Loosen thread tension	19 ~ 21
	– Check for tangled or caught thread	22
	– Use high quality light weight thread	39
	– Shorten stitch length	23
	– Decrease presser foot pressure for light weight fabrics	38
Irregular trimming	– Check alignment of knives	41
	– Replace one or both knives	41
Fabric jams	– Close looper cover before sewing	6
	– Check for tangled or caught thread	22
	– Compress thick layers of fabric with conventional machine before sewing with overlock	
Machine does not operate	– Connect machine to power source	6

27. OPTIONAL ACCESSORIES AND ATTACHMENTS

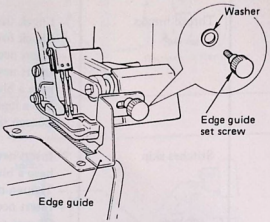
(1) Sewing with an Overlock

* For additional information, the following book is recommended. Sewing with an Overlock-From The Singer Sewing Reference Library, published by Cy Decosse Incorporated.



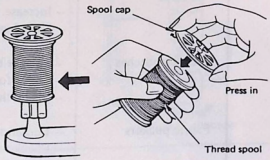
(2) Edge Guide (P/N 281465)

* Attaches to the looper cover to aid in seaming and decorative sewing such as flatlocking and pin tucking.



(3) Spool Cap (S) (P/N 546894)

* Adapts a regular thread spool for use on the overlock machine.



(4) Anti-spill Net (S) (P/N 543131)

* For use with threads that easily spill off the cone.

(5) Ultra Hem Foot (P/N 376719)

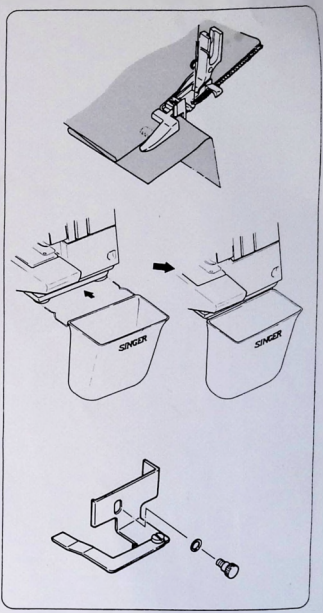
* Special foot that makes sewing a blind hem easier. The machine will trim the excess fabric, finish off the edge and sew a hem in one operation.
(See page 31)

(6) Clean Pocket (P/N 370292)

* Fits under the base of the machine and catches the fabric scraps as they are trimmed.

(7) Fabric Separator (P/N 281464)

* Most suited for gathering when sewing tiered skirts, yokes, cuffs and frills on skirts etc.
(See **Gathered Overedge**, page 36 for gather stitching).



28. SPECIFICATION

Item		Specification
Sewing speed		1,300 spm maximum
Stitch length (feed amount)		1 ~ 5mm (Standard: Rolled hemming F ~ 2, ordinary overedge 3)
Differential feed ratio		1:0.77 ~ 1:2.0 (with differential feed machine)
Overedge stitch width		Rolled hemming 1.5mm, ordinary overedge 3.5 ~ 7.2mm (standard 3.5mm)
Needle bar stroke		27mm
Presser foot rise		5mm
Needle		Singer Cat. No. 2054 (#10). #14
Number of threads		4
Machine dimensions		Width 326mm x depth 272mm x height 270mm
Weight	14U444B	5.8 kg
	14U454B	6.1 kg

Karen - at home
773 - 5897

Sears 16631.490 - Model

Form U6270 (893)
Part No. 379459-002
Printed in Japan